

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A unit cell for a solid oxide fuel cell comprising:
a substrate ~~including a portion having a first porosity;~~
a battery element formed on the substrate and provided with an electrode layer and an electrolyte layer; ~~and~~
a high porosity layer disposed in the substrate; and
~~a low porosity layer provided in at least one of the substrate and the battery element to have a second porosity lower than the first porosity, sizes of a plurality of pores of the low porosity layer ranging in a value equal to or less than 10 μ m to laminate a part of the battery element on the low porosity layer~~ including a first low porosity layer, disposed in the substrate with material to be included in the substrate, and a second low porosity layer, disposed in the electrode layer with material to be included in the electrode layer, and the second low porosity layer being formed and laminated on the second low porosity layer,
wherein a porosity of the first low porosity layer is lower than that of the high porosity layer and equal to or higher than that of the second low porosity layer, with value ranges of a pore size, a thickness and a surface roughness Ra of the first low porosity layer being the same as those of the second low porosity layer.
2. (Currently amended) The unit cell according to claim 1, ~~wherein the low porosity layer is composed of material to be included in the electrode layer, and the~~

electrolyte layer ~~including~~ includes solid oxide ~~is formed and laminated on the low porosity layer.~~

3. (Currently amended) The unit cell according to claim ~~21~~, wherein ~~the low porosity layer functions as the electrode layer~~ a value range of the pore size of the first low porosity layer and that of the second low porosity layer are equal to or less than 10 μm .

4. (Currently amended) The unit cell according to claim 1, wherein the material of the second low porosity layer ~~is composed of~~ includes material to be included in the electrolyte layer, ~~and the electrolyte layer including solid oxide is formed and laminated on the low porosity layer.~~

5. (Canceled).

6. (Canceled).

7. (Canceled).

8. (Canceled).

9. (Currently amended) The unit cell according to claim 1, wherein ~~the low porosity layer has a thickness~~ a value range of the thickness of the first low porosity layer and that of the second low porosity layer are equal to or less than 500 μm .

10. (Currently amended) The unit cell according to claim 1, wherein ~~the low porosity layer has a surface roughness Ra~~ a value range of the surface roughness Ra of the first low porosity layer and that of the second low porosity layer are equal to or less than 5 μm .

11. (Currently amended) The unit cell according to claim 1, wherein the ~~second~~ porosity of the first low porosity layer ~~is equal to or~~ and that of the second low porosity layer are not less than 10%.

12. (Currently amended) The unit cell according to claim 11, wherein the ~~second~~ porosity of the first low porosity layer decreased toward the battery element.

13. (Currently amended) The unit cell according to claim 1, wherein ~~each of the electrode layer and the electrolyte layer~~ has a thickness equal to or less than 50 μm .

14. (Original) The unit cell according to claim 1, wherein the substrate has a gas permeability.

15. (Currently amended) A method of manufacturing a unit cell for a solid oxide fuel cell, comprising:

preparing a substrate including ~~a portion having a first porosity~~ high porosity layer and
a first low porosity layer; and

~~laminating~~ forming a battery element provided with ~~an~~ a pair of electrode layers and an electrolyte layer disposed therebetween, on the first low porosity layer of the substrate, with one of electrode layers being a second low porosity layer formed and laminated on the first low porosity layer, and the electrolyte layer being formed on the second low porosity, and

~~forming a low porosity layer in at least one of the substrate and the battery element to have a second porosity lower than the first porosity, sizes of a plurality of pores of the low porosity layer ranging in a value equal to or less than 10 μm to laminate a part of the battery element on the low porosity layer~~

wherein porosity of the first low porosity layer is lower than that of the high porosity layer and equal to or higher than that of the second low porosity layer, with value ranges of a pore size, a thickness and a surface roughness Ra of the first low porosity layer being the same as those of the second low porosity layer.

16. (Currently amended) The method of manufacturing the unit cell for the solid oxide fuel cell according to claim 15, wherein at least one of the first low porosity layer and the second low porosity layer is formed by at least one of a slurry coating method and a green sheet sintering method.

17. (Currently amended) The method of manufacturing the unit cell for the solid oxide fuel cell according to claim 15, wherein ~~at least one of the electrolyte layer and the electrode layer~~ is formed by a physical vapor deposition method.